**Test Reference:**

|  |  |
| --- | --- |
| /\*\* |  |
|  | \* Add a new user to the database. |
|  | \* @param uname The user's name |
|  | \* @param mac The user's mac address |
|  | \* @param team The user's team ('gold' or 'green' as a String)  \*/ |

**Equivalent Classes:**

|  |  |  |
| --- | --- | --- |
|  | **Valid** | **Invalid** |
| **uname** | * **1.1 -** string composed of permissible characters that abides by the length requirements | * **1.a -** non-encoded characters * **1.b -** empty string * **1.c -** single char * **1.d -** integer type * **1.e -** valid characters, out of bounds * **1.f -** null |
| **mac** | * **2.1 -** valid mac address string | * **2.a -** invalid mac address * **2.b -** empty string * **2.c -** single character * **2.d -** integer type * **2.e -** null |
| **team** | * **3.1 -** “gold” literal * **3.2 -** “green” literal * **3.3** - “GOld” mix of upper and lowercase letters * **3.4** - “GrEen” mix of upper and lowercase letters * **3.5** - “GOLD” literal * **3.6** - “GREEN” literal | * **3.a -** null * **3.b -** empty string * **3.c -** string with 1 character * **3.d -** integer type |

**Class Representatives:**

|  |  |
| --- | --- |
| Equivalence Class | Representative |
| 1.1 | “tenbergen” |
| 1.a | “北” |
| 1.b | “” |
| 1.c | “a” |
| 1.d | 17 |
| 1.e | “JosephusJosephusJosephus” |
| 1.f | null |
| 2.1 | “00-14-22-01-23-45” |
| 2.a | “00-80-C8-E3-4C-B北” |
| 2.b | “” |
| 2.c | “b” |
| 2.d | 21 |
| 2.e | null |
| 3.1 | “gold” |
| 3.2 | “green” |
| 3.3 | “GoLd” |
| 3.4 | “GreeN” |
| 3.5 | “GOLD” |
| 3.6 | “GREEN” |
| 3.a | null |
| 3.b | “” |
| 3.c | “c” |
| 3.d | 79 |

**Representative Boundaries:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Equiv. Class** | **Representative** | **Lower Boundary** | **Upper Boundary** |
| 1.1 | “tenbergen” | “tenberge” | “tenbergenb” |
| 1.a | “北” | 典 | 书 |
| 1.b | “” | - | “a” |
| 1.c | “a” | “” | “aa” |
| 1.d | 17 | 16 | 18 |
| 1.e | “JosephusJosephusJosephus” | “JosephusJosephusJosephu” | “JosephusJosephusJosephuss” |
| 1.f | null | - | - |
| 2.1 | “00-14-22-01-23-45” | “00-14-22-01-23-44” | “00-14-22-01-23-46” |
| 2.a | “00-80-C8-E3-4C-B北” | “00-80-C8-E3-4C-B典” | “00-80-C8-E3-4C-B书” |
| 2.b | “” | - | “b” |
| 2.c | “b” | “” | “bb” |
| 2.d | 21 | 20 | 22 |
| 2.e | null | - | - |
| 3.1 | “gold” | “gol” | “goldd” |
| 3.2 | “green” | “gree” | “greenn” |
| 3.3 | “goLd” | “goL” | “goLdd” |
| 3.4 | “GreEn” | “GreE” | “GreEnn” |
| 3.5 | “GOLD” | “GOL” | “GOLDD” |
| 3.6 | “GREEN” | “GREE” | “GREENN” |
| 3.a | null | - | - |
| 3.b | “” | - | “c” |
| 3.c | “c” | “” | “cc” |
| 3.d | 79 | 78 | 80 |

**Test Cases:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test ID** | **uname** | **mac** | **team** | **Eq. Class** | **Expected Output** |
| t\_0 | “tenbergen” | “00-14-22-01-23-45” | “gold” | 1.1, 2.1, 3.1 |  |
| t\_1 | “tenbergen” | “00-14-22-01-23-45” | “green” | 1.1, 2.1, 3.2 |  |
| t\_2 | “tenbergen” | “00-14-22-01-23-45” | “GoLd” | 1.1, 2.1, 3.3 |  |
| t\_3 | “tenbergen” | “00-14-22-01-23-45” | “GreeN” | 1.1, 2.1, 3.4 |  |
| t\_4 | “tenbergen” | “00-14-22-01-23-45” | “GOLD” | 1.1, 2.1, 3.5 |  |
| t\_5 | “tenbergen” | “00-14-22-01-23-45” | “GREEN” | 1.1, 2.1, 3.6 |  |
| t\_6 | “北” | “00-14-22-01-23-45” | “gold” | 1.a | ERROR |
| t\_7 | “” | “00-14-22-01-23-45” | “green” | 1.b | ERROR |
| t\_8 | “a” | “00-14-22-01-23-45” | “GoLd” | 1.c | ERROR |
| t\_9 | 17 | “00-14-22-01-23-45” | “GreeN” | 1.d | ERROR |
| t\_10 | “JosephusJosephusJosephus” | “00-14-22-01-23-45” | “GOLD” | 1.e | ERROR |
| t\_11 | null | “00-14-22-01-23-45” | “GREEN” | 1.f | ERROR |
| t\_12 | “tenbergen” | “00-80-C8-E3-4C-B北” | “GreeN” | 2.a | ERROR |
| t\_13 | “tenbergen” | “” | “GOLD” | 2.b | ERROR |
| t\_14 | “tenbergen” | “b” | “GREEN” | 2.c | ERROR |
| t\_15 | “tenbergen” | 21 | “gold” | 2.d | ERROR |
| t\_16 | “tenbergen” | null | “GreeN” | 2.e | ERROR |
| t\_17 | “tenbergen” | “00-14-22-01-23-45” | null | 3.a | ERROR |
| t\_18 | “tenbergen” | “00-14-22-01-23-45” | “” | 3.b | ERROR |
| t\_19 | “tenbergen” | “00-14-22-01-23-45” | “c” | 3.c | ERROR |
| t\_20 | “tenbergen” | “00-14-22-01-23-45” | 79 | 3.d | ERROR |
| t\_21 | “tenberge” | “00-14-22-01-23-45” | “gold” | 1.1 |  |
| t\_22 | “tenbergenn” | “00-14-22-01-23-45” | “green” | 1.1 |  |
| t\_23 | 典 | “00-14-22-01-23-45” | “gold” | 1.a | ERROR |
| t\_24 | 书 | “00-14-22-01-23-45” | “green” | 1.a | ERROR |
| t\_25 | “aa” | “00-14-22-01-23-45” | “GoLd” | 1.c | ERROR |
| t\_26 | 16 | “00-14-22-01-23-45” | “GreeN” | 1.d | ERROR |
| t\_27 | 18 | “00-14-22-01-23-45” | “GOLD” | 1.d | ERROR |
| t\_28 | “JosephusJosephusJosephu” | “00-14-22-01-23-45” | “GREEN” | 1.e | ERROR |
| t\_29 | “JosephusJosephusJosephuss” | “00-14-22-01-23-45” | “gold” | 1.e | ERROR |
| t\_30 | “tenbergen” | “00-14-22-01-23-44” | “GREEN” | 2.1 |  |
| t\_31 | “tenbergen” | “00-14-22-01-23-46” | “gold” | 2.1 |  |
| t\_32 | “tenbergen” | “00-80-C8-E3-4C-B典” | “GreeN” | 2.a | ERROR |
| t\_33 | “tenbergen” | “00-80-C8-E3-4C-B书” | “GOLD” | 2.a | ERROR |
| t\_34 | “tenbergen” | “bb” | “GREEN” | 2.c | ERROR |
| t\_35 | “tenbergen” | 20 | “gold” | 2.d | ERROR |
| t\_36 | “tenbergen” | 22 | “GreeN” | 2.d | ERROR |
| t\_37 | “tenbergen” | “00-14-22-01-23-45” | “gol” | 3.1 |  |
| t\_38 | “tenbergen” | “00-14-22-01-23-45” | “goldd” | 3.1 |  |
| t\_39 | “tenbergen” | “00-14-22-01-23-45” | “gree” | 3.2 |  |
| t\_40 | “tenbergen” | “00-14-22-01-23-45” | “greenn” | 3.2 |  |
| t\_41 | “tenbergen” | “00-14-22-01-23-45” | “goL” | 3.3 |  |
| t\_42 | “tenbergen” | “00-14-22-01-23-45” | “goLdd” | 3.3 |  |
| t\_43 | “tenbergen” | “00-14-22-01-23-45” | “greE” | 3.4 |  |
| t\_44 | “tenbergen” | “00-14-22-01-23-45” | “greEnn” | 3.4 |  |
| t\_45 | “tenbergen” | “00-14-22-01-23-45” | “GOL” | 3.5 |  |
| t\_46 | “tenbergen” | “00-14-22-01-23-45” | “GOLDD” | 3.5 |  |
| t\_47 | “tenbergen” | “00-14-22-01-23-45” | “GREE” | 3.6 |  |
| t\_48 | “tenbergen” | “00-14-22-01-23-45” | “GREENN” | 3.6 |  |
| t\_49 | “tenbergen” | “00-14-22-01-23-45” | “c” | 3.b | ERROR |
| t\_50 | “tenbergen” | “00-14-22-01-23-45” | “cc” | 3.c | ERROR |
| t\_51 | “tenbergen” | “00-14-22-01-23-45” | 78 | 3.d | ERROR |
| t\_52 | “tenbergen” | “00-14-22-01-23-45” | 80 | 3.d | ERROR |